

Application No.: 10/827,236
Examiner: Fenstermacher, D. M.
Art Unit: 3682

AMENDMENT

Please amend the pending application in accordance with the following particulars.

In the Claims

The claims are amended as shown on the following pages under the heading AMENDMENT TO THE CLAIMS. The list shows the status of all claims presently in the application and is intended to supersede all prior versions of the claims in the application. Any cancellation of claims is made without prejudice or disclaimer.

AMENDMENT TO THE CLAIMS

Claim 1 (Currently Amended). A gearbox for a gardening machine, said gardening machine having a cutter, said gearbox comprising: a housing having therein a receiving chamber; a transmission gear wheel mounted in said receiving chamber for rotation driven by an external driving force; an eccentric shaft assembly mounted in said receiving chamber and coupled to said transmission gear wheel for rotation together with said transmission gear wheel and further driving action of said cutter of said gardening machine; and a lubricating blade mounted at a bottom side of said receiving chamber and tightly connected with said eccentric shaft assembly for rotation together with said eccentric shaft assembly, said lubricating blade having a plurality of arched grooves for delivering lubricating oil located at the bottom side of said receiving chamber to said transmission gear wheel and said eccentric shaft assembly by the rotation;

wherein said housing further comprises a bottom cover shell, a top cover shell connected with said bottom cover shell, and a transmission chamber in communication with said receiving chamber and outside for receiving a driving source for rotation of said transmission gear wheel, said top cover shell having a filling hole in communication with said receiving chamber for filling lubricating oil therein.

Claim 2 (Canceled).

Claim 3 (Original). The gearbox as defined in claim 1 further comprising a bearing plate, said bearing plate being made of a rigid metallic laminate and supported between said transmission gear wheel and said eccentric shaft assembly.

Claim 4 (Original). The gearbox as defined in claim 1, wherein said transmission gear wheel comprises a center through hole and an inner thread formed in the center through hole; said lubricating blade comprises a locating hole; said eccentric shaft assembly comprises a first eccentric wheel, a second eccentric wheel, a first transmission bar coupled to said first eccentric wheel, and a second transmission

bar coupled to said second eccentric wheel, said first eccentric wheel and said second eccentric wheel each comprising a wheel body and a wheel axle eccentrically extended from one side of said wheel body, said wheel bodies of said eccentric wheels being partially attached to each other to have said wheel axles aligned with each other, said wheel axle of said first eccentric wheel having an outer thread threaded into the inner thread of said transmission gear wheel, the wheel axle of said second eccentric wheel having a locating rod coupled to the locating hole of said lubricating blade, said first and second transmission bars each having a coupling end, an actuating end connectable to said cutter of said gardening machine, and a coupling hole formed at said coupling end, said wheel bodies of said first and second eccentric wheels being respectively supported on needle bearing in said coupling holes of said first and second transmission bars for allowing said first and second transmission bars to be rotated relative to said wheel bodies of said first and second eccentric wheels.

Claim 5 (Original). The gearbox as defined in claim 1, wherein said lubricating blade is made of a metallic plate.

Claim 6 (Original). The gearbox as defined in claim 1, wherein said lubricating blade comprises a flat center portion; said arched grooves are respectively radially extended around said flat center portion and each comprises two ends, one end being higher than the other end in elevation, said arched grooves each having an decreasing width from said one end toward said the other end.

Claim 7 (Original). The gearbox as defined in claim 6, wherein said lubricating blade further comprises a plurality of guide surface portions spaced around said flat center portion and respectively extended from said arched grooves, whereby said lubricating oil is guided from said arched grooves to said guide surface portions to be further delivered to said transmission gear wheel and said eccentric shaft assembly.

Claim 8 (Original). The gearbox as defined in claim 1, wherein said transmission gear wheel further comprises a wheelbase, a plurality of teeth arranged around an outer periphery of said wheelbase, a center through hole axially running

through two opposite sides of a center thereof, two central areas formed around the center through hole thereof, two recessed portions respectively formed around said two central areas, and a plurality of openings cut through said recessed portions, thickness between said recessed portions of said transmission gear wheel being relatively smaller than said central areas and said outer periphery of said wheelbase.

Claim 9 (Canceled).

Claim 10 (New). A gearbox for a gardening machine, said gardening machine having a cutter, said gearbox comprising: a housing having therein a receiving chamber; a transmission gear wheel mounted in said receiving chamber for rotation driven by an external driving force; an eccentric shaft assembly mounted in said receiving chamber and coupled to said transmission gear wheel for rotation together with said transmission gear wheel and further driving action of said cutter of said gardening machine; and a lubricating blade mounted at a bottom side of said receiving chamber and tightly connected with said eccentric shaft assembly for rotation together with said eccentric shaft assembly, said lubricating blade having a plurality of arched grooves for delivering lubricating oil located at the bottom side of said receiving chamber to said transmission gear wheel and said eccentric shaft assembly by the rotation;

wherein said transmission gear wheel comprises a center through hole and an inner thread formed in the center through hole; said lubricating blade comprises a locating hole; said eccentric shaft assembly comprises a first eccentric wheel, a second eccentric wheel, a first transmission bar coupled to said first eccentric wheel, and a second transmission bar coupled to said second eccentric wheel, said first eccentric wheel and said second eccentric wheel each comprising a wheel body and a wheel axle eccentrically extended from one side of said wheel body, said wheel bodies of said eccentric wheels being partially attached to each other to have said wheel axles aligned with each other, said wheel axle of said first eccentric wheel having an outer thread threaded into the inner thread of said transmission gear wheel, the wheel axle of said second eccentric wheel having a locating rod coupled to the

locating hole of said lubricating blade, said first and second transmission bars each having a coupling end, an actuating end connectable to said cutter of said gardening machine, and a coupling hole formed at said coupling end, said wheel bodies of said first and second eccentric wheels being respectively supported on needle bearing in said coupling holes of said first and second transmission bars for allowing said first and second transmission bars to be rotated relative to said wheel bodies of said first and second eccentric wheels.

Claim 11 (New). A gearbox for a gardening machine, said gardening machine having a cutter, said gearbox comprising: a housing having therein a receiving chamber; a transmission gear wheel mounted in said receiving chamber for rotation driven by an external driving force; an eccentric shaft assembly mounted in said receiving chamber and coupled to said transmission gear wheel for rotation together with said transmission gear wheel and further driving action of said cutter of said gardening machine; and a lubricating blade mounted at a bottom side of said receiving chamber and tightly connected with said eccentric shaft assembly for rotation together with said eccentric shaft assembly, said lubricating blade having a plurality of arched grooves for delivering lubricating oil located at the bottom side of said receiving chamber to said transmission gear wheel and said eccentric shaft assembly by the rotation;

wherein said lubricating blade comprises a flat center portion; said arched grooves are respectively radially extended around said flat center portion and each comprises two ends, one end being higher than the other end in elevation, said arched grooves each having an decreasing width from said one end toward said the other end.

Claim 12 (New). The gearbox as defined in claim 11, wherein said lubricating blade further comprises a plurality of guide surface portions spaced around said flat center portion and respectively extended from said arched grooves, whereby said lubricating oil is guided from said arched grooves to said guide surface portions to be further delivered to said transmission gear wheel and said eccentric shaft assembly.

Claim 13 (New). A gearbox for a gardening machine, said gardening machine having a cutter, said gearbox comprising: a housing having therein a receiving chamber; a transmission gear wheel mounted in said receiving chamber for rotation driven by an external driving force; an eccentric shaft assembly mounted in said receiving chamber and coupled to said transmission gear wheel for rotation together with said transmission gear wheel and further driving action of said cutter of said gardening machine; and a lubricating blade mounted at a bottom side of said receiving chamber and tightly connected with said eccentric shaft assembly for rotation together with said eccentric shaft assembly, said lubricating blade having a plurality of arched grooves for delivering lubricating oil located at the bottom side of said receiving chamber to said transmission gear wheel and said eccentric shaft assembly by the rotation;

wherein said transmission gear wheel further comprises a wheelbase, a plurality of teeth arranged around an outer periphery of said wheelbase, a center through hole axially running through two opposite sides of a center thereof, two central areas formed around the center through hole thereof, two recessed portions respectively formed around said two central areas, and a plurality of openings cut through said recessed portions, thickness between said recessed portions of said transmission gear wheel being relatively smaller than said central areas and said outer periphery of said wheelbase.